

1 **TITLE VI—DOE PROGRAMS**

2 **SEC. 6001. PURPOSES.**

3 The purposes of this title are to—

4 (1) contribute to a national energy strategy
5 through Department of Energy programs that pro-
6 mote the production and conservation of energy in
7 partnership with industry;

8 (2) protect and strengthen the Nation's econ-
9 omy, standard of living, and national security by re-
10 ducing dependence on imported energy;

11 (3) meet future needs for energy services at the
12 lowest total cost to the Nation, giving balanced and
13 comprehensive consideration to technologies that im-
14 prove the efficiency of energy end uses and that en-
15 hance energy supply;

16 (4) reduce the environmental impacts of energy
17 production, distribution, transportation, and use;

18 (5) help increase domestic production of energy,
19 increase the availability of hydrocarbon reserves, and
20 lower energy prices; and

21 (6) stimulate economic growth and enhance the
22 ability of United States companies to compete in fu-
23 ture markets for advanced energy technologies.

24 **SEC. 6002. DEFINITIONS.**

25 For purposes of this title:



1 (1) DEPARTMENT.—The term “Department”
2 means the Department of Energy.

3 (2) DEPARTMENTAL MISSION.—The term “de-
4 partmental mission” means any of the functions
5 vested in the Secretary of Energy by the Depart-
6 ment of Energy Organization Act (42 U.S.C. 7101
7 et seq.) or other law.

8 (3) INSTITUTION OF HIGHER EDUCATION.—The
9 term “institution of higher education” has the
10 meaning given that term in section 101(a) of the
11 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

12 (4) JOINT VENTURE.—The term “joint ven-
13 ture” has the meaning given that term under section
14 2 of the National Cooperative Research and Produc-
15 tion Act of 1993 (15 U.S.C. 4301).

16 (5) NATIONAL LABORATORY.—The term “Na-
17 tional Laboratory” means any of the following lab-
18 oratories owned by the Department:

19 (A) Ames National Laboratory.

20 (B) Argonne National Laboratory.

21 (C) Brookhaven National Laboratory.

22 (D) Fermi National Laboratory.

23 (E) Idaho National Engineering and Envi-
24 ronmental Laboratory.



1 (F) Lawrence Berkeley National Labora-
2 tory.

3 (G) Lawrence Livermore National Labora-
4 tory.

5 (H) Los Alamos National Laboratory.

6 (I) National Energy Technology Labora-
7 tory.

8 (J) National Renewable Energy Labora-
9 tory.

10 (K) Oak Ridge National Laboratory.

11 (L) Pacific Northwest National Labora-
12 tory.

13 (M) Princeton Plasma Physics Laboratory.

14 (N) Sandia National Laboratories.

15 (O) Thomas Jefferson National Accel-
16 erator Facility.

17 (6) NONMILITARY ENERGY LABORATORY.—The
18 term “nonmilitary energy laboratory” means any of
19 the following laboratories of the Department:

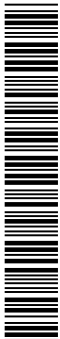
20 (A) Ames National Laboratory.

21 (B) Argonne National Laboratory.

22 (C) Brookhaven National Laboratory.

23 (D) Fermi National Laboratory.

24 (E) Lawrence Berkeley National Labora-
25 tory.



1 (F) Oak Ridge National Laboratory.

2 (G) Pacific Northwest National Labora-
3 tory.

4 (H) Princeton Plasma Physics Laboratory.

5 (I) Stanford Linear Accelerator Center.

6 (J) Thomas Jefferson National Accelerator
7 Facility.

8 (7) SECRETARY.—The term “Secretary” means
9 the Secretary of Energy.

10 **Subtitle A—Energy Efficiency**

11 **PART 1—AUTHORIZATION OF APPROPRIATIONS**

12 **SEC. 6011. ENERGY EFFICIENCY.**

13 (a) IN GENERAL.—The following sums are author-
14 ized to be appropriated to the Secretary for energy effi-
15 ciency and conservation activities, including activities au-
16 thorized under this subtitle:

17 (1) For fiscal year 2003, \$560,000,000.

18 (2) For fiscal year 2004, \$616,000,000.

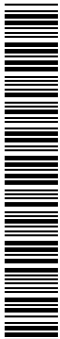
19 (3) For fiscal year 2005, \$695,000,000.

20 (4) For fiscal year 2006, \$772,000,000.

21 (5) For fiscal year 2007, \$865,000,000.

22 (b) ALLOCATIONS.—From amounts authorized under
23 subsection (a), the following sums are authorized:

24 (1) LIGHTING SYSTEMS.—For activities under
25 section 6021, \$10,000,000 for fiscal year 2003 and



1 \$50,000,000 for each of fiscal years 2004 through
2 2007.

3 (2) SECONDARY ELECTRIC VEHICLE BATTERY
4 USE PROGRAM.—For activities under section 6032—

5 (A) for fiscal year 2003, \$1,000,000;

6 (B) for fiscal year 2004, \$4,000,000;

7 (C) for fiscal year 2005, \$7,000,000;

8 (D) for fiscal year 2006, \$7,000,000; and

9 (E) for fiscal year 2007, \$7,000,000.

10 (c) EXTENDED AUTHORIZATION.—There are author-
11 ized to be appropriated to the Secretary for activities
12 under section 6021, \$50,000,000 for each of fiscal years
13 2008 through 2012.

14 (d) LIMITS ON USE OF FUNDS.—None of the funds
15 authorized to be appropriated under this section may be
16 used for—

17 (1) the promulgation and implementation of en-
18 ergy efficiency regulations;

19 (2) the Weatherization Assistance Program
20 under part A of title IV of the Energy Conservation
21 and Production Act;

22 (3) the State Energy Program under part D of
23 title III of the Energy Policy and Conservation Act;
24 or



1 (4) the Federal Energy Management Program
2 under part 3 of title V of the National Energy Con-
3 servation Policy Act.

4 **PART 2—LIGHTING SYSTEMS**

5 **SEC. 6021. NEXT GENERATION LIGHTING INITIATIVE.**

6 (a) IN GENERAL.—The Secretary shall carry out a
7 Next Generation Lighting Initiative in accordance with
8 this section to support activities related to advanced solid-
9 state lighting technologies based on white light emitting
10 diodes.

11 (b) OBJECTIVES.—The objectives of the initiative
12 shall be—

13 (1) to develop, by 2012, advanced solid-state
14 lighting technologies based on white light emitting
15 diodes that, compared to incandescent and fluores-
16 cent lighting technologies, are—

17 (A) longer lasting;

18 (B) more energy-efficient; and

19 (C) cost-competitive;

20 (2) to develop an inorganic white light emitting
21 diode that has an efficiency of 160 lumens per watt
22 and a 10-year lifetime; and

23 (3) to develop an organic white light emitting
24 diode with an efficiency of 100 lumens per watt with
25 a 5-year lifetime that—



1 (A) illuminates over a full color spectrum;

2 (B) covers large areas over flexible sur-
3 faces; and

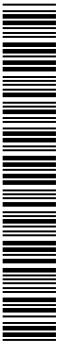
4 (C) does not contain harmful pollutants,
5 such as mercury, typical of fluorescent lamps.

6 (c) CONSORTIUM.—

7 (1) IN GENERAL.—The Secretary shall establish
8 the Next Generation Lighting Initiative through a
9 private consortium (which may include private firms,
10 trade associations and institutions of higher edu-
11 cation), which the Secretary shall select through a
12 competitive process. Each proposed consortium shall
13 submit to the Secretary such information as the Sec-
14 retary may require, including a program plan agreed
15 to by all participants of the consortium.

16 (2) JOINT VENTURE.—The consortium shall be
17 structured as a joint venture among the participants
18 of the consortium. The Secretary shall serve on the
19 governing council of the consortium.

20 (3) ELIGIBILITY.—To be eligible to be selected
21 as the consortium under paragraph (1), an applicant
22 must be broadly representative of United States
23 solid-state lighting research, development, and man-
24 ufacturing expertise as a whole.



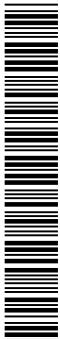
1 (4) GRANTS.—(A) The Secretary shall award
2 grants to the consortium, which the consortium may
3 disburse to researchers, including those who are not
4 participants of the consortium.

5 (B) To receive a grant, the consortium must
6 provide a description to the Secretary of the pro-
7 posed activities and list the parties that will receive
8 funding.

9 (5) NATIONAL LABORATORIES.—National Lab-
10 oratories may participate in the activities described
11 in this section, and may receive funds from the con-
12 sortium.

13 (6) INTELLECTUAL PROPERTY.—Participants in
14 the consortium and the Federal Government shall
15 have royalty-free nonexclusive rights to use intellec-
16 tual property derived from activities funded pursu-
17 ant to this subsection.

18 (d) DEVELOPMENT, DEMONSTRATION, AND COM-
19 MERCIAL APPLICATION.—The Secretary shall carry out
20 the development, demonstration, and commercial applica-
21 tion activities of the Next Generation Lighting Initiative
22 through awards to private firms, trade associations, and
23 institutions of higher education. In selecting awardees, the
24 Secretary may give preference to members of the consor-
25 tium selected pursuant to subsection (c).



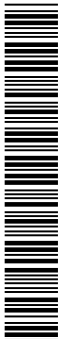
1 (e) PLANS AND ASSESSMENTS.—(1) The consortium
2 shall formulate an annual operating plan which shall in-
3 clude priorities, technical milestones, and plans for tech-
4 nology transfer, and which shall be subject to approval by
5 the Secretary.

6 (2) The Secretary shall enter into an arrangement
7 with the National Academy of Sciences to conduct periodic
8 reviews of the Next Generation Lighting Initiative. The
9 Academy shall review the priorities, technical milestones,
10 and plans for technology transfer established under para-
11 graph (1) and evaluate the progress toward achieving
12 them. The Secretary shall consider the results of such re-
13 views in evaluating the plans submitted under paragraph
14 (1).

15 (f) AUDIT.—The Secretary shall retain an inde-
16 pendent, commercial auditor to perform an audit of the
17 consortium to determine the extent to which the funds au-
18 thorized by this section have been expended in a manner
19 consistent with the purposes of this section. The auditor
20 shall transmit a report annually to the Secretary, who
21 shall transmit the report to the Congress, along with a
22 plan to remedy any deficiencies cited in the report.

23 (g) SUNSET.—The Next Generation Lighting Initia-
24 tive shall terminate no later than September 30, 2013.

25 (h) DEFINITIONS.—As used in this section:



1 (1) ADVANCED SOLID-STATE LIGHTING.—The
2 term “advanced solid-state lighting” means a
3 semiconducting device package and delivery system
4 that produces white light using externally applied
5 voltage.

6 (2) INORGANIC WHITE LIGHT EMITTING
7 DIODE.—The term “inorganic white light emitting
8 diode” means an inorganic semiconducting package
9 that produces white light using externally applied
10 voltage.

11 (3) ORGANIC WHITE LIGHT EMITTING DIODE.—
12 The term “organic white light emitting diode”
13 means an organic semiconducting compound that
14 produces white light using externally applied voltage.

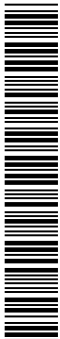
15 **PART 3—VEHICLES**

16 **SEC. 6031. DEFINITIONS.**

17 For purposes of this part, the term—

18 (1) “battery” means an energy storage device
19 that previously has been used to provide motive
20 power in a vehicle powered in whole or in part by
21 electricity; and

22 (2) “associated equipment” means equipment
23 located where the batteries will be used that is nec-
24 essary to enable the use of the energy stored in the
25 batteries.



1 **SEC. 6032. ESTABLISHMENT OF SECONDARY ELECTRIC VE-**
2 **HICLE BATTERY USE PROGRAM.**

3 (a) PROGRAM.—The Secretary shall establish and
4 conduct a program for the secondary use of batteries.
5 Such program shall be—

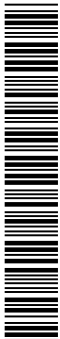
6 (1) designed to demonstrate the use of batteries
7 in secondary application, including utility and com-
8 mercial power storage and power quality;

9 (2) structured to evaluate the performance, in-
10 cluding useful service life and costs, of such bat-
11 teries in field operations, and evaluate the necessary
12 supporting infrastructure, including reuse and dis-
13 posal of batteries; and

14 (3) coordinated with ongoing secondary battery
15 use programs at the National Laboratories and in
16 industry.

17 (b) SOLICITATION.—(1) Not later than 6 months
18 after the date of the enactment of this Act, the Secretary
19 shall solicit proposals to demonstrate the secondary use
20 of batteries and associated equipment and supporting in-
21 frastructure in geographic locations throughout the
22 United States. The Secretary may make additional solici-
23 tations for proposals if the Secretary determines that such
24 solicitations are necessary to carry out this section.

25 (2)(A) Proposals submitted in response to a sollicita-
26 tion under this section shall include—



1 (i) a description of the project, including the
2 batteries to be used in the project, the proposed lo-
3 cations and applications for the batteries, the num-
4 ber of batteries to be demonstrated, and the type,
5 characteristics, and estimated life-cycle costs of the
6 batteries compared to other energy storage devices
7 currently used;

8 (ii) the contribution, if any, of State or local
9 governments and other persons to the demonstration
10 project;

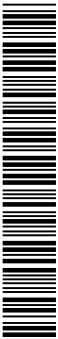
11 (iii) the type of associated equipment and sup-
12 porting infrastructure to be demonstrated; and

13 (iv) any other information the Secretary con-
14 siderers appropriate.

15 (B) If the proposal includes a lease arrangement, the
16 proposal shall indicate the terms of such lease arrange-
17 ment for the batteries and associated equipment.

18 (c) SELECTION OF PROPOSALS.—(1)(A) The Sec-
19 retary, in cooperation with affected Federal Regulatory
20 agencies, shall, not later than 3 months after the closing
21 date established by the Secretary for receipt of proposals
22 under subsection (b), select at least 5 proposals to receive
23 financial assistance under this section.

24 (B) No one project selected under this section shall
25 receive more than 25 percent of the funds authorized



1 under this section. No more than 3 projects selected under
2 this section shall demonstrate the same battery type.

3 (2) In selecting a proposal under this section, the
4 Secretary shall consider—

5 (A) the ability of the proposer to acquire the
6 batteries and associated equipment and to success-
7 fully manage and conduct the demonstration project,
8 including satisfying the reporting requirements set
9 forth in paragraph (3)(B);

10 (B) the geographic and climatic diversity of the
11 projects selected;

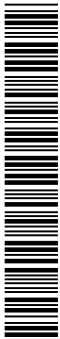
12 (C) the long-term technical and competitive via-
13 bility of the batteries to be used in the project and
14 of the original manufacturer of such batteries;

15 (D) the suitability of the batteries for their in-
16 tended uses;

17 (E) the technical performance of the batteries,
18 including the expected additional useful life and the
19 batteries' ability to retain energy;

20 (F) the environmental effects of the use of and
21 disposal of the batteries proposed to be used in the
22 project selected;

23 (G) the extent of involvement of State or local
24 government and other persons in the demonstration
25 project and whether such involvement will—



1 (i) permit a reduction of the Federal cost
2 share per project; or

3 (ii) otherwise be used to allow the Federal
4 contribution to be provided to demonstrate a
5 greater number of batteries; and

6 (H) such other criteria as the Secretary con-
7 siders appropriate.

8 (3) CONDITIONS.—The Secretary shall require that—

9 (A) as a part of a demonstration project, the
10 users of the batteries provide to the proposer infor-
11 mation regarding the operation, maintenance, per-
12 formance, and use of the batteries, and the proposer
13 provide such information to the battery manufac-
14 turer, for 3 years after the beginning of the dem-
15 onstration project;

16 (B) the proposer provide to the Secretary and
17 the Administrator of the United States Environ-
18 mental Protection Agency such information regard-
19 ing the operation, maintenance, performance, and
20 use of the batteries as the Secretary or the Adminis-
21 trator may request;

22 (C) the proposer provide to the Secretary such
23 information regarding the disposal of the batteries
24 as the Secretary may require to ensure that the pro-



1 poser disposes of the batteries in accordance with
2 applicable law; and

3 (D) the proposer provide at least 50 percent of
4 the costs associated with the proposal.

5 **Subtitle B—Distributed Energy and**
6 **Electric Energy Systems**

7 **PART 1—AUTHORIZATION OF APPROPRIATIONS**

8 **SEC. 6201. DISTRIBUTED ENERGY AND ELECTRIC ENERGY**
9 **SYSTEMS.**

10 The following sums are authorized to be appropriated
11 to the Secretary for distributed energy and electric energy
12 systems activities, including activities authorized under
13 this subtitle:

14 (1) For fiscal year 2004, \$190,000,000.

15 (2) For fiscal year 2005, \$200,000,000.

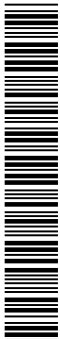
16 (3) For fiscal year 2006, \$220,000,000.

17 (4) For fiscal year 2007, \$240,000,000.

18 **PART 2—DISTRIBUTED POWER**

19 **SEC. 6221. STRATEGY.**

20 (a) REQUIREMENT.—Not later than 1 year after the
21 date of enactment of this Act, the Secretary shall develop
22 and transmit to the Congress a strategy for a comprehen-
23 sive program to develop hybrid distributed power systems
24 that combine—



1 (1) one or more renewable electric power gen-
2 eration technologies of 10 megawatts or less located
3 near the site of electric energy use; and

4 (2) nonintermittent electric power generation
5 technologies suitable for use in a distributed power
6 system.

7 (b) CONTENTS.—The strategy shall—

8 (1) identify the needs best met with such hybrid
9 distributed power systems and the technological bar-
10 riers to the use of such systems;

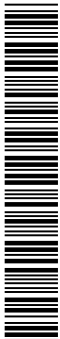
11 (2) provide for the development of methods to
12 design, test, integrate into systems, and operate
13 such hybrid distributed power systems;

14 (3) include, as appropriate, activities needed for
15 the adoption of such hybrid distributed power sys-
16 tems, including energy storage devices and environ-
17 mental control technologies; and

18 (4) describe how activities under the strategy
19 will be integrated with other activities supported by
20 the Department of Energy related to electric power
21 technologies.

22 **SEC. 6222. HIGH POWER DENSITY INDUSTRY PROGRAM.**

23 The Secretary shall establish a comprehensive pro-
24 gram to improve energy efficiency of high power density
25 facilities, including data centers, server farms, and tele-



1 communications facilities. Such program shall consider
2 technologies that provide significant improvement in ther-
3 mal controls, metering, load management, peak load re-
4 duction, or the efficient cooling of electronics.

5 **SEC. 6223. MICRO-COGENERATION ENERGY TECHNOLOGY.**

6 The Secretary shall make competitive, merit-based
7 grants to consortia for the development of micro-cogenera-
8 tion energy technology. The consortia shall explore the use
9 of small-scale combined heat and power in residential
10 heating appliances.

11 **PART 3—TRANSMISSION SYSTEMS**

12 **SEC. 6231. TRANSMISSION INFRASTRUCTURE SYSTEMS.**

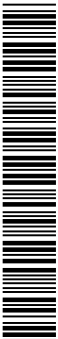
13 (a) PROGRAM AUTHORIZED.—The Secretary shall de-
14 velop a program to promote improved reliability and effi-
15 ciency of electrical transmission systems. Such program
16 may include—

17 (1) advanced energy technologies, materials,
18 and systems;

19 (2) advanced grid reliability and efficiency tech-
20 nology development;

21 (3) technologies contributing to significant load
22 reductions;

23 (4) advanced metering, load management, and
24 control technologies;



1 (5) technologies to enhance existing grid compo-
2 nents;

3 (6) the development and use of high-tempera-
4 ture superconductors to—

5 (A) enhance the reliability, operational
6 flexibility, or power-carrying capability of elec-
7 tric transmission or distribution systems; or

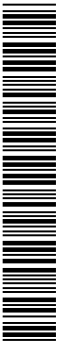
8 (B) increase the efficiency of electric en-
9 ergy generation, transmission, distribution, or
10 storage systems;

11 (7) integration of power systems, including sys-
12 tems to deliver high-quality electric power, electric
13 power reliability, and combined heat and power;

14 (8) any other infrastructure technologies, as ap-
15 propriate; and

16 (9) technology transfer and education.

17 (b) PROGRAM PLAN.—Not later than 1 year after the
18 date of the enactment of this Act, the Secretary, in con-
19 sultation with other appropriate Federal agencies, shall
20 prepare and transmit to Congress a 5-year program plan
21 to guide activities under this section. In preparing the pro-
22 gram plan, the Secretary shall consult with utilities, en-
23 ergy services providers, manufacturers, institutions of
24 higher education, other appropriate State and local agen-
25 cies, environmental organizations, professional and tech-



1 nical societies, and any other persons the Secretary con-
2 sider appropriate.

3 (c) REPORT.—Not later than 2 years after the trans-
4 mittal of the plan under subsection (b), the Secretary shall
5 transmit a report to Congress describing the progress
6 made under this section and identifying any additional re-
7 sources needed to continue the development and commer-
8 cial application of transmission infrastructure tech-
9 nologies.

10 **Subtitle C—Renewable Energy**

11 **PART 1—AUTHORIZATION OF APPROPRIATIONS**

12 **SEC. 6301. RENEWABLE ENERGY.**

13 (a) IN GENERAL.—The following sums are author-
14 ized to be appropriated to the Secretary for renewable en-
15 ergy activities, including activities authorized under this
16 subtitle:

17 (1) For fiscal year 2004, \$460,000,000.

18 (2) For fiscal year 2005, \$510,000,000.

19 (3) For fiscal year 2006, \$560,000,000.

20 (4) For fiscal year 2007, \$609,000,000.

21 (b) BIOENERGY.—From the amounts authorized
22 under subsection (a), the following sums are authorized
23 to be appropriated to carry out section 6321 and other
24 bioenergy activities:

25 (1) For fiscal year 2004, \$135,425,000.



1 (2) For fiscal year 2005, \$155,600,000.

2 (3) For fiscal year 2006, \$167,650,000.

3 (4) For fiscal year 2007, \$180,000,000.

4 (c) USE OF FUNDS.—

5 (1) BIOENERGY.—Of the funds authorized
6 under subsection (b), not less than \$5,000,000 for
7 each fiscal year shall be made available for grants to
8 Historically Black Colleges and Universities, Tribal
9 Colleges, and Hispanic-Serving Institutions.

10 (2) RURAL AND REMOTE LOCATIONS.—In car-
11 rying out this section, the Secretary, in consultation
12 with the Secretary of Agriculture, shall demonstrate
13 the production and use of energy from advanced
14 wind power technology, biomass, geothermal energy
15 systems, and other renewable energy technologies in
16 order to assist in delivering electricity to rural and
17 remote locations.

18 **PART 2—BIOENERGY**

19 **SEC. 6321. BIOENERGY PROGRAMS.**

20 (a) PROGRAM.—The Secretary shall conduct a pro-
21 gram to facilitate the production of bioenergy, including—

22 (1) biopower energy systems;

23 (2) biofuels;

24 (3) integrated applications of both biopower and
25 biofuels;



1 (4) feedstocks; and

2 (5) economic analysis.

3 (b) DEFINITION.—For purposes of this section, the
4 term “bioenergy” includes energy produced from animal
5 waste and agricultural crops.

6 **Subtitle D—Nuclear Energy**

7 **PART 1—AUTHORIZATION OF APPROPRIATIONS**

8 **SEC. 6411. NUCLEAR ENERGY.**

9 (a) CORE PROGRAMS.—The following sums are au-
10 thorized to be appropriated to the Secretary for nuclear
11 energy activities, regulation of research and development
12 activities and nuclear regulatory research, including activi-
13 ties authorized under this subtitle, other than those de-
14 scribed in subsection (b):

15 (1) For fiscal year 2004, \$200,000,000.

16 (2) For fiscal year 2005, \$233,000,000.

17 (3) For fiscal year 2006, \$266,000,000.

18 (4) For fiscal year 2007, \$300,000,000.

19 (b) NUCLEAR INFRASTRUCTURE SUPPORT.—The fol-
20 lowing sums are authorized to be appropriated to the Sec-
21 retary for activities under section 6421(f):

22 (1) For fiscal year 2004, \$120,000,000.

23 (2) For fiscal year 2005, \$125,000,000.

24 (3) For fiscal year 2006, \$130,000,000.

25 (4) For fiscal year 2007, \$135,000,000.



1 (c) ALLOCATIONS.—From amounts authorized under
2 subsection (a), the following sums are authorized:

3 (1) ADVANCED FUEL RECYCLING PROGRAM.—

4 For activities under section 6431—

5 (A) for fiscal year 2004, \$80,000,000;

6 (B) for fiscal year 2005, \$93,000,000;

7 (C) for fiscal year 2006, \$106,000,000;

8 and

9 (D) for fiscal year 2007, \$120,000,000.

10 (2) UNIVERSITY PROGRAMS.—For activities
11 under section 6441—

12 (A) for fiscal year 2004, \$25,000,000;

13 (B) for fiscal year 2005, \$33,900,000;

14 (C) for fiscal year 2006, \$37,900,000; and

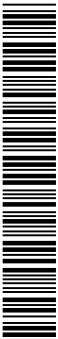
15 (D) for fiscal year 2007, \$43,600,000.

16 (d) LIMIT ON USE OF FUNDS.—None of the funds
17 authorized under this section may be used for decommis-
18 sioning the Fast Flux Test Facility.

19 **PART 2—NUCLEAR ENERGY RESEARCH**
20 **PROGRAMS**

21 **SEC. 6421. NUCLEAR ENERGY RESEARCH PROGRAMS.**

22 (a) NUCLEAR ENERGY RESEARCH INITIATIVE.—The
23 Secretary shall carry out a Nuclear Energy Research Ini-
24 tiative for research and development related to nuclear en-
25 ergy.



1 (b) NUCLEAR ENERGY PLANT OPTIMIZATION PRO-
2 GRAM.—The Secretary shall carry out a Nuclear Energy
3 Plant Optimization Program to support research and de-
4 velopment activities addressing reliability, availability, pro-
5 ductivity, and component aging in existing nuclear power
6 plants.

7 (c) NUCLEAR POWER 2010 PROGRAM.—The Sec-
8 retary shall carry out a Nuclear Power 2010 Program,
9 consistent with recommendations in the October 2001 re-
10 port entitled “A Roadmap to Deploy New Nuclear Power
11 Plants in the United States by 2010” issued by the Nu-
12 clear Energy Research Advisory Committee of the Depart-
13 ment. The Program shall—

14 (1) rely on the expertise and capabilities of the
15 National Laboratories in the areas of advanced nu-
16 clear fuels cycles and fuels testing;

17 (2) pursue an approach that considers a variety
18 of reactor designs;

19 (3) include participation of international col-
20 laborators in research, development, and design ef-
21 forts as appropriate; and

22 (4) encourage industry participation.

23 (d) GENERATION IV NUCLEAR ENERGY SYSTEMS
24 INITIATIVE.—The Secretary shall carry out a Generation
25 IV Nuclear Energy Systems Initiative to develop an over-



1 all technology plan and to support research and develop-
2 ment necessary to make an informed technical decision
3 about the most promising candidates for eventual commer-
4 cial application. The Initiative shall examine advanced
5 proliferation-resistant and passively safe reactor designs,
6 including designs that—

7 (1) are economically competitive with other elec-
8 tric power generation plants;

9 (2) have higher efficiency, lower cost, and im-
10 proved safety compared to reactors in operation on
11 the date of enactment of this Act;

12 (3) use fuels that are proliferation resistant and
13 have substantially reduced production of high-level
14 waste per unit of output; and

15 (4) utilize improved instrumentation.

16 (e) REACTOR PRODUCTION OF HYDROGEN.—The
17 Secretary shall carry out research to examine designs for
18 high-temperature reactors capable of producing large-scale
19 quantities of hydrogen using thermochemical processes.

20 (f) NUCLEAR INFRASTRUCTURE SUPPORT.—The
21 Secretary shall develop and implement a strategy for the
22 facilities of the Office of Nuclear Energy, Science, and
23 Technology and shall transmit a report containing the
24 strategy along with the President's budget request to the



1 Congress for fiscal year 2005. Such strategy shall provide
2 a cost-effective means for—

3 (1) maintaining existing facilities and infra-
4 structure, as needed;

5 (2) closing unneeded facilities;

6 (3) making facility upgrades and modifications;

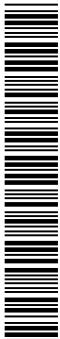
7 and

8 (4) building new facilities.

9 **PART 3—ADVANCED FUEL RECYCLING**

10 **SEC. 6431. ADVANCED FUEL RECYCLING PROGRAM.**

11 (a) IN GENERAL.—The Secretary, through the Direc-
12 tor of the Office of Nuclear Energy, Science and Tech-
13 nology, shall conduct an advanced fuel recycling tech-
14 nology research and development program to evaluate pro-
15 liferation-resistant fuel recycling and transmutation tech-
16 nologies which minimize environmental or public health
17 and safety impacts as an alternative to aqueous reprocess-
18 ing technologies deployed as of the date of enactment of
19 this Act in support of evaluation of alternative national
20 strategies for spent nuclear fuel and the Generation IV
21 advanced reactor concepts, subject to annual review by the
22 Secretary's Nuclear Energy Research Advisory Committee
23 or other independent entity, as appropriate. Opportunities
24 to enhance progress of this program through international
25 cooperation should be sought.



1 (b) REPORTS.—The Secretary shall report on the ac-
2 tivities of the advanced fuel recycling technology research
3 and development program, as part of the Department's
4 annual budget submission.

5 **PART 4—UNIVERSITY PROGRAMS**

6 **SEC. 6441. UNIVERSITY NUCLEAR SCIENCE AND ENGINEER-**
7 **ING SUPPORT.**

8 (a) ESTABLISHMENT.—The Secretary shall support
9 a program to invest in human resources and infrastructure
10 in the nuclear sciences and engineering and related fields
11 (including health physics and nuclear and radiochemistry),
12 consistent with departmental missions related to civilian
13 nuclear research and development.

14 (b) DUTIES.—In carrying out the program under this
15 section, the Secretary shall—

16 (1) establish a graduate and undergraduate fel-
17 lowship program to attract new and talented stu-
18 dents;

19 (2) establish a Junior Faculty Research Initi-
20 ation Grant Program to assist institutions of higher
21 education in recruiting and retaining new faculty in
22 the nuclear sciences and engineering;

23 (3) support fundamental nuclear sciences and
24 engineering research through the Nuclear Engineer-
25 ing Education Research Program;



1 (4) encourage collaborative nuclear research
2 among industry, National Laboratories, and institu-
3 tions of higher education through the Nuclear En-
4 ergy Research Initiative; and

5 (5) support communication and outreach re-
6 lated to nuclear science and engineering.

7 (c) MAINTAINING UNIVERSITY RESEARCH AND
8 TRAINING REACTORS AND ASSOCIATED INFRASTRUC-
9 TURE.—Activities under this section may include—

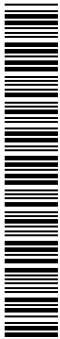
10 (1) converting research reactors currently using
11 high-enrichment fuels to low-enrichment fuels, up-
12 grading operational instrumentation, and sharing of
13 reactors among institutions of higher education;

14 (2) providing technical assistance, in collabora-
15 tion with the United States nuclear industry, in reli-
16 censing and upgrading training reactors as part of
17 a student training program; and

18 (3) providing funding for reactor improvements
19 as part of a focused effort that emphasizes research,
20 training, and education.

21 (d) UNIVERSITY-NATIONAL LABORATORY INTER-
22 ACTIONS.—The Secretary shall develop—

23 (1) a sabbatical fellowship program for profes-
24 sors at institutions of higher education to spend ex-



1 tended periods of time at National Laboratories in
2 the areas of nuclear science and technology; and

3 (2) a visiting scientist program in which Na-
4 tional Laboratory staff can spend time in academic
5 nuclear science and engineering departments.

6 The Secretary may provide fellowships for students to
7 spend time at National Laboratories in the area of nuclear
8 science with a member of the Laboratory staff acting as
9 a mentor.

10 (e) OPERATING AND MAINTENANCE COSTS.—Fund-
11 ing for a research project provided under this section may
12 be used to offset a portion of the operating and mainte-
13 nance costs of a research reactor at an institution of high-
14 er education used in the research project.

15 **Subtitle E—Fossil Energy**

16 **PART 1—AUTHORIZATION OF APPROPRIATIONS**

17 **SEC. 6501. FOSSIL ENERGY.**

18 There are authorized to be appropriated to the Sec-
19 retary for fossil energy activities, including activities au-
20 thorized under this subtitle—

21 (1) \$523,000,000 for fiscal year 2004;

22 (2) \$542,000,000 for fiscal year 2005;

23 (3) \$558,000,000 for fiscal year 2006; and

24 (4) \$585,000,000 for fiscal year 2007.



1 **PART 2—ULTRA-DEEPWATER AND UNCONVEN-**
2 **TIONAL NATURAL GAS AND OTHER PETRO-**
3 **LEUM RESOURCES**

4 **SEC. 6521. PROGRAM AUTHORITY.**

5 (a) IN GENERAL.—The Secretary shall carry out a
6 program under this part for ultra-deepwater and uncon-
7 ventional natural gas and other petroleum resource explo-
8 ration and production, including safe operations and envi-
9 ronmental mitigation.

10 (b) PROGRAM ELEMENTS.—The program under this
11 part shall address the following areas, including improving
12 safety and minimizing environmental impacts of activities
13 within each area:

14 (1) Ultra-deepwater technology.

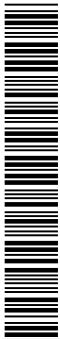
15 (2) Ultra-deepwater architecture.

16 (3) Unconventional natural gas and other petro-
17 leum resource exploration and production tech-
18 nology.

19 (c) LIMITATION ON LOCATION OF FIELD ACTIVI-
20 TIES.—Field activities under the program under this part
21 shall be carried out only—

22 (1) in—

23 (A) areas in the territorial waters of the
24 United States not under any Outer Continental
25 Shelf moratorium as of September 30, 2002;



1 (B) areas onshore in the United States on
2 public land administered by the Secretary of the
3 Interior available for oil and gas leasing, where
4 consistent with applicable law and land use
5 plans; and

6 (C) areas onshore in the United States on
7 State or private land, subject to applicable law;
8 and

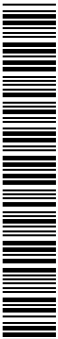
9 (2) with the approval of the appropriate Fed-
10 eral or State land management agency or private
11 land owner.

12 (d) NATIONAL ENERGY TECHNOLOGY LABORA-
13 TORY.—The Secretary, through the National Energy
14 Technology Laboratory, shall carry out activities com-
15 plementary to activities under subsection (b)(1).

16 (e) CONSULTATION WITH SECRETARY OF THE INTE-
17 RIOR.—In carrying out this part, the Secretary shall con-
18 sult regularly with the Secretary of the Interior.

19 **SEC. 6522. ULTRA-DEEPWATER PROGRAM.**

20 (a) IN GENERAL.—The Secretary shall carry out the
21 activities under paragraphs (1) and (2) of section 6521(b),
22 to maximize the value of the ultra-deepwater natural gas
23 and other petroleum resources of the United States by in-
24 creasing the supply of such resources and by reducing the
25 cost and increasing the efficiency of exploration for and



1 production of such resources, while improving safety and
2 minimizing environmental impacts.

3 (b) ROLE OF THE SECRETARY.—The Secretary shall
4 have ultimate responsibility for, and oversight of, all as-
5 pects of the program under this section.

6 (c) ROLE OF THE PROGRAM CONSORTIUM.—

7 (1) IN GENERAL.—The Secretary shall contract
8 with a consortium to—

9 (A) manage awards pursuant to subsection
10 (f)(4);

11 (B) make recommendations to the Sec-
12 retary for project solicitations;

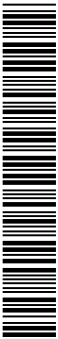
13 (C) disburse funds awarded under sub-
14 section (f) as directed by the Secretary in ac-
15 cordance with the annual plan under subsection
16 (e); and

17 (D) carry out other activities assigned to
18 the program consortium by this section.

19 (2) LIMITATION.—The Secretary may not as-
20 sign any activities to the program consortium except
21 as specifically authorized under this section.

22 (3) CONFLICT OF INTEREST.—(A) The Sec-
23 retary shall establish procedures—

24 (i) to ensure that each board member, offi-
25 cer, or employee of the program consortium



1 who is in a decisionmaking capacity under sub-
2 section (f)(3) or (4) shall disclose to the Sec-
3 retary any financial interests in, or financial re-
4 lationships with, applicants for or recipients of
5 awards under this section, including those of
6 his or her spouse or minor child, unless such re-
7 lationships or interests would be considered to
8 be remote or inconsequential; and

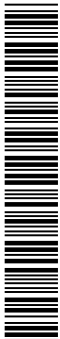
9 (ii) to require any board member, officer,
10 or employee with a financial relationship or in-
11 terest disclosed under clause (i) to recuse him-
12 self or herself from any review under subsection
13 (f)(3) or oversight under subsection (f)(4) with
14 respect to such applicant or recipient.

15 (B) The Secretary may disqualify an applica-
16 tion or revoke an award under this section if a board
17 member, officer, or employee has failed to comply
18 with procedures required under subparagraph
19 (A)(ii).

20 (d) SELECTION OF THE PROGRAM CONSORTIUM.—

21 (1) IN GENERAL.—The Secretary shall select
22 the program consortium through an open, competi-
23 tive process.

24 (2) MEMBERS.—The program consortium may
25 include corporations, institutions of higher edu-



1 cation, National Laboratories, or other research in-
2 stitutions. After submitting a proposal under para-
3 graph (4), the program consortium may not add
4 members without the consent of the Secretary.

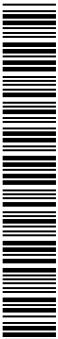
5 (3) TAX STATUS.—The program consortium
6 shall be an entity that is exempt from tax under sec-
7 tion 501(c)(3) of the Internal Revenue Code of
8 1986.

9 (4) SCHEDULE.—Not later than 90 days after
10 the date of enactment of this Act, the Secretary
11 shall solicit proposals for the creation of the pro-
12 gram consortium, which must be submitted not less
13 than 180 days after the date of enactment of this
14 Act. The Secretary shall select the program consor-
15 tium not later than 240 days after such date of en-
16 actment.

17 (5) APPLICATION.—Applicants shall submit a
18 proposal including such information as the Secretary
19 may require. At a minimum, each proposal shall—

20 (A) list all members of the consortium;

21 (B) fully describe the structure of the con-
22 sortium, including any provisions relating to in-
23 tellectual property; and



1 (C) describe how the applicant would carry
2 out the activities of the program consortium
3 under this section.

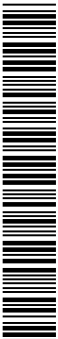
4 (6) ELIGIBILITY.—To be eligible to be selected
5 as the program consortium, an applicant must be an
6 entity whose members collectively have demonstrated
7 capabilities in planning and managing programs in
8 natural gas or other petroleum exploration or pro-
9 duction.

10 (7) CRITERION.—The Secretary may consider
11 the amount of the fee an applicant proposes to re-
12 ceive under subsection (g) in selecting a consortium
13 under this section.

14 (e) ANNUAL PLAN.—

15 (1) IN GENERAL.—The program under this sec-
16 tion shall be carried out pursuant to an annual plan
17 prepared by the Secretary in accordance with para-
18 graph (2).

19 (2) DEVELOPMENT.—(A) Before drafting an
20 annual plan under this subsection, the Secretary
21 shall solicit specific written recommendations from
22 the program consortium for each element to be ad-
23 dressed in the plan, including those described in
24 paragraph (4). The Secretary may request that the



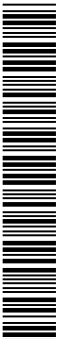
1 program consortium submit its recommendations in
2 the form of a draft annual plan.

3 (B) The Secretary shall submit the rec-
4 ommendations of the program consortium under
5 subparagraph (A) to the Ultra-Deepwater Advisory
6 Committee established under section 6525(a) for re-
7 view, and such Advisory Committee shall provide to
8 the Secretary written comments by a date deter-
9 mined by the Secretary. The Secretary may also so-
10 licit comments from any other experts.

11 (C) The Secretary shall consult regularly with
12 the program consortium throughout the preparation
13 of the annual plan.

14 (3) PUBLICATION.—The Secretary shall trans-
15 mit to the Congress and publish in the Federal Reg-
16 ister the annual plan, along with any written com-
17 ments received under paragraph (2)(A) and (B).
18 The annual plan shall be transmitted and published
19 not later than 60 days after the date of enactment
20 of an Act making appropriations for a fiscal year for
21 the program under this section.

22 (4) CONTENTS.—The annual plan shall describe
23 the ongoing and prospective activities of the pro-
24 gram under this section and shall include—



1 (A) a list of any solicitations for awards
2 that the Secretary plans to issue to carry out
3 activities, including the topics for such work,
4 who would be eligible to apply, selection cri-
5 teria, and the duration of awards; and

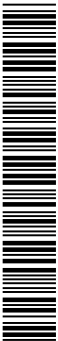
6 (B) a description of the activities expected
7 of the program consortium to carry out sub-
8 section (f)(4).

9 (f) AWARDS.—

10 (1) IN GENERAL.—The Secretary shall make
11 awards to carry out activities under the program
12 under this section. The program consortium shall
13 not be eligible to receive such awards, but members
14 of the program consortium may receive such awards.

15 (2) PROPOSALS.—The Secretary shall solicit
16 proposals for awards under this subsection in such
17 manner and at such time as the Secretary may pre-
18 scribe, in consultation with the program consortium.

19 (3) REVIEW.—The Secretary shall make awards
20 under this subsection through a competitive process,
21 which shall include a review by individuals selected
22 by the Secretary. Such individuals shall include, for
23 each application, Federal officials, the program con-
24 sortium, and non-Federal experts who are not board



1 members, officers, or employees of the program con-
2 sortium or of a member of the program consortium.

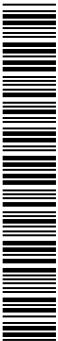
3 (4) OVERSIGHT.—(A) The program consortium
4 shall oversee the implementation of awards under
5 this subsection, consistent with the annual plan
6 under subsection (e), including disbursing funds and
7 monitoring activities carried out under such awards
8 for compliance with the terms and conditions of the
9 awards.

10 (B) Nothing in subparagraph (A) shall limit the
11 authority or responsibility of the Secretary to over-
12 see awards, or limit the authority of the Secretary
13 to review or revoke awards.

14 (C) The Secretary shall provide to the program
15 consortium the information necessary for the pro-
16 gram consortium to carry out its responsibilities
17 under this paragraph.

18 (g) FEE.—

19 (1) IN GENERAL.—To compensate the program
20 consortium for carrying out its activities under this
21 section, the Secretary shall provide to the program
22 consortium a fee in an amount not to exceed 7.5
23 percent of the amounts awarded under subsection (f)
24 for each fiscal year.



1 (2) ADVANCE.—The Secretary shall advance
2 funds to the program consortium upon selection of
3 the consortium, which shall be deducted from
4 amounts to be provided under paragraph (1).

5 (h) AUDIT.—The Secretary shall retain an inde-
6 pendent, commercial auditor to determine the extent to
7 which funds provided to the program consortium, and
8 funds provided under awards made under subsection (f),
9 have been expended in a manner consistent with the pur-
10 poses and requirements of this part. The auditor shall
11 transmit a report annually to the Secretary, who shall
12 transmit the report to Congress, along with a plan to rem-
13 edy any deficiencies cited in the report.

14 **SEC. 6523. UNCONVENTIONAL NATURAL GAS AND OTHER**
15 **PETROLEUM RESOURCES PROGRAM.**

16 (a) IN GENERAL.—The Secretary, after consulting
17 with appropriate Federal regulatory agencies, shall carry
18 out activities under section 6521(b)(3), to maximize the
19 value of the onshore unconventional natural gas and other
20 petroleum resources of the United States by increasing the
21 supply of such resources and by reducing the cost and in-
22 creasing the efficiency of exploration for and production
23 of such resources, while improving safety and minimizing
24 environmental impacts.

25 (b) AWARDS.—



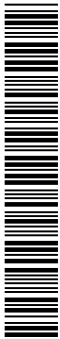
1 (1) IN GENERAL.—The Secretary shall carry
2 out this section through awards made through an
3 open, competitive process.

4 (2) CONSORTIA.—In carrying out paragraph
5 (1), the Secretary shall give preference to making
6 awards to consortia.

7 (c) AUDIT.—The Secretary shall retain an inde-
8 pendent, commercial auditor to determine the extent to
9 which funds provided under awards made under this sec-
10 tion have been expended in a manner consistent with the
11 purposes and requirements of this part. The auditor shall
12 transmit a report annually to the Secretary, who shall
13 transmit the report to Congress, along with a plan to rem-
14 edy any deficiencies cited in the report.

15 (d) FOCUS AREAS.—Awards under this section may
16 focus on areas including advanced coal-bed methane, deep
17 drilling, natural gas production from tight sands, natural
18 gas production from gas shales, innovative exploration and
19 production techniques, enhanced recovery techniques, and
20 environmental mitigation of unconventional natural gas
21 and other petroleum resources exploration and production.

22 (e) ACTIVITIES BY THE UNITED STATES GEOLOGI-
23 CAL SURVEY.—The Secretary of the Interior, through the
24 United States Geological Survey, shall, where appropriate,



1 carry out programs to complement the programs under
2 this section.

3 **SEC. 6524. ADDITIONAL REQUIREMENTS FOR AWARDS.**

4 (a) DEMONSTRATION PROJECTS.—An application for
5 an award under this part for a demonstration project shall
6 describe with specificity the intended commercial use of
7 the technology to be demonstrated.

8 (b) FLEXIBILITY IN LOCATING DEMONSTRATION
9 PROJECTS.—Subject to the limitation in section 6521(c),
10 a demonstration project under this part relating to an
11 ultra-deepwater technology or an ultra-deepwater architec-
12 ture may be conducted in deepwater depths.

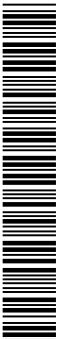
13 (c) INTELLECTUAL PROPERTY AGREEMENTS.—If an
14 award under this part is made to a consortium (other than
15 the program consortium), the consortium shall provide to
16 the Secretary a signed contract agreed to by all members
17 of the consortium describing the rights of each member
18 to intellectual property used or developed under the award.

19 (d) TECHNOLOGY TRANSFER.—Each recipient of an
20 award under this part shall conduct technology transfer
21 activities, as appropriate.

22 **SEC. 6525. ADVISORY COMMITTEES.**

23 (a) ULTRA-DEEPWATER ADVISORY COMMITTEE.—

24 (1) ESTABLISHMENT.—Not later than 270 days
25 after the date of enactment of this section, the Sec-



1 retary shall establish an advisory committee to be
2 known as the Ultra-Deepwater Advisory Committee.

3 (2) MEMBERSHIP.—The advisory committee
4 under this subsection shall be composed of members
5 appointed by the Secretary and including—

6 (A) individuals with extensive experience or
7 operational knowledge of offshore natural gas
8 and other petroleum exploration and produc-
9 tion;

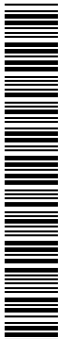
10 (B) individuals broadly representative of
11 the affected interests in ultra-deepwater natural
12 gas and other petroleum production, including
13 interests in environmental protection and safe
14 operations;

15 (C) no individuals who are Federal employ-
16 ees; and

17 (D) no individuals who are board members,
18 officers, or employees of the program consor-
19 tium.

20 (3) DUTIES.—The advisory committee under
21 this subsection shall—

22 (A) advise the Secretary on the develop-
23 ment and implementation of programs under
24 this part related to ultra-deepwater natural gas
25 and other petroleum resources; and



1 (B) carry out section 6522(e)(2)(B).

2 (4) COMPENSATION.—A member of the advi-
3 sory committee under this subsection shall serve
4 without compensation but shall receive travel ex-
5 penses, including per diem in lieu of subsistence, in
6 accordance with applicable provisions under sub-
7 chapter I of chapter 57 of title 5, United States
8 Code.

9 (b) UNCONVENTIONAL RESOURCES TECHNOLOGY
10 ADVISORY COMMITTEE.—

11 (1) ESTABLISHMENT.—Not later than 270 days
12 after the date of enactment of this section, the Sec-
13 retary shall establish an advisory committee to be
14 known as the Unconventional Resources Technology
15 Advisory Committee.

16 (2) MEMBERSHIP.—The advisory committee
17 under this subsection shall be composed of members
18 appointed by the Secretary and including—

19 (A) individuals with extensive experience or
20 operational knowledge of unconventional nat-
21 ural gas and other petroleum resource explo-
22 ration and production, including independent oil
23 and gas producers;

24 (B) individuals broadly representative of
25 the affected interests in unconventional natural



1 gas and other petroleum resource exploration
2 and production, including interests in environ-
3 mental protection and safe operations; and

4 (C) no individuals who are Federal employ-
5 ees.

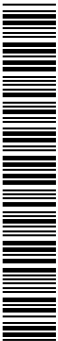
6 (3) DUTIES.—The advisory committee under
7 this subsection shall advise the Secretary on the de-
8 velopment and implementation of activities under
9 this part related to unconventional natural gas and
10 other petroleum resources.

11 (4) COMPENSATION.—A member of the advi-
12 sory committee under this subsection shall serve
13 without compensation but shall receive travel ex-
14 penses, including per diem in lieu of subsistence, in
15 accordance with applicable provisions under sub-
16 chapter I of chapter 57 of title 5, United States
17 Code.

18 (c) PROHIBITION.—No advisory committee estab-
19 lished under this section shall make recommendations on
20 funding awards to consortia or for specific projects.

21 **SEC. 6526. LIMITS ON PARTICIPATION.**

22 (a) IN GENERAL.—An entity shall be eligible to re-
23 ceive an award under this part only if the Secretary
24 finds—



1 (1) that the entity's participation in the pro-
2 gram under this part would be in the economic in-
3 terest of the United States; and

4 (2) that either—

5 (A) the entity is a United States-owned en-
6 tity organized under the laws of the United
7 States; or

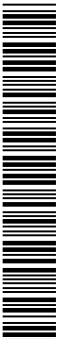
8 (B) the entity is organized under the laws
9 of the United States and has a parent entity or-
10 ganized under the laws of a country which
11 affords—

12 (i) to United States-owned entities op-
13 portunities, comparable to those afforded
14 to any other entity, to participate in any
15 cooperative venture similar to those au-
16 thorized under this part;

17 (ii) to United States-owned entities
18 local investment opportunities comparable
19 to those afforded to any other entity; and

20 (iii) adequate and effective protection
21 for the intellectual property rights of
22 United States-owned entities.

23 (b) SENSE OF CONGRESS AND REPORT.—It is the
24 Sense of the Congress that ultra-deepwater technology de-
25 veloped under this part is to be developed primarily for



1 production of ultra-deepwater natural gas and other petro-
2 leum resources of the United States, and that this priority
3 is to be reflected in the terms of grants, contracts, and
4 cooperative agreements entered under this part. As part
5 of the annual Departmental budget submission, the Sec-
6 retary shall report on all steps taken to implement the pol-
7 icy described in this subsection.

8 **SEC. 6527. FUND.**

9 There is hereby established in the Treasury of the
10 United States a separate fund to be known as the “Ultra-
11 Deepwater and Unconventional Natural Gas and Other
12 Petroleum Products Fund”.

13 **SEC. 6528. SUNSET.**

14 The authority provided by this part shall terminate
15 on September 30, 2010.

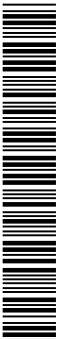
16 **SEC. 6529. DEFINITIONS.**

17 In this part:

18 (1) DEEPWATER.—The term “deepwater”
19 means a water depth that is greater than 200 but
20 less than 1,500 meters.

21 (2) PROGRAM CONSORTIUM.—The term “pro-
22 gram consortium” means the consortium selected
23 under section 6522(d).

24 (3) REMOTE OR INCONSEQUENTIAL.—The term
25 “remote or inconsequential” has the meaning given



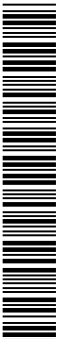
1 that term in regulations issued by the Office of Gov-
2 ernment Ethics under section 208(b)(2) of title 18,
3 United States Code.

4 (4) ULTRA-DEEPWATER.—The term “ultra-
5 deepwater” means a water depth that is equal to or
6 greater than 1,500 meters.

7 (5) ULTRA-DEEPWATER ARCHITECTURE.—The
8 term “ultra-deepwater architecture” means the inte-
9 gration of technologies for the exploration for, or
10 production of, natural gas or other petroleum re-
11 sources located at ultra-deepwater depths.

12 (6) ULTRA-DEEPWATER TECHNOLOGY.—The
13 term “ultra-deepwater technology” means a discrete
14 technology that is specially suited to address one or
15 more challenges associated with the exploration for,
16 or production of, natural gas or other petroleum re-
17 sources located at ultra-deepwater depths.

18 (7) UNCONVENTIONAL NATURAL GAS AND
19 OTHER PETROLEUM RESOURCE.—The term “uncon-
20 ventional natural gas and other petroleum resource”
21 means natural gas and other petroleum resource lo-
22 cated onshore in an economically inaccessible geo-
23 logical formation.



1 **Subtitle F—Miscellaneous**

2 **SEC. 6601. WASTE REDUCTION AND USE OF ALTERNATIVES.**

3 (a) GRANT AUTHORITY.—The Secretary is author-
4 ized to make a single grant to a qualified institution to
5 examine and develop the feasibility of burning post-con-
6 sumer carpet in cement kilns as an alternative energy
7 source. The purposes of the grant shall include
8 determining—

9 (1) how post-consumer carpet can be burned
10 without disrupting kiln operations;

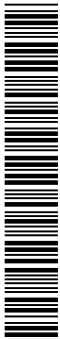
11 (2) the extent to which overall kiln emissions
12 may be reduced;

13 (3) the emissions of air pollutants and other
14 relevant environmental impacts; and

15 (4) how this process provides benefits to both
16 cement kiln operations and carpet suppliers.

17 (b) QUALIFIED INSTITUTION.—For the purposes of
18 subsection (a), a qualified institution is a research-inten-
19 sive institution of higher education with demonstrated ex-
20 pertise in the fields of fiber recycling and logistical mod-
21 eling of carpet waste collection and preparation.

22 (c) WASTE REDUCTION AND USE OF ALTER-
23 NATIVES.—There are authorized to be appropriated to the
24 Secretary to carry out activities under this section
25 \$500,000 for fiscal year 2004.



1 **SEC. 6602. COAL GASIFICATION.**

2 The Secretary is authorized to provide loan guaran-
3 tees for a project to produce energy from a plant using
4 integrated gasification combined cycle technology of at
5 least 400 megawatts in capacity that produces power at
6 competitive rates in deregulated energy generation mar-
7 kets and that does not receive any subsidy (direct or indi-
8 rect) from ratepayers.

9 **SEC. 6603. PETROLEUM COKE GASIFICATION.**

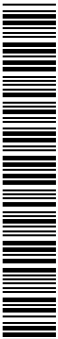
10 The Secretary is authorized to provide loan guaran-
11 tees for at least one petroleum coke gasification
12 polygeneration project.

13 **SEC. 6604. OTHER BIOPOWER AND BIOENERGY.**

14 The Secretary shall conduct a program to assist in
15 the planning, design, and implementation of projects to
16 convert rice straw, rice hulls, sugarcane bagasse, forest
17 thinnings, and barley grain into biopower and biofuels.

18 **SEC. 6605. TECHNOLOGY TRANSFER.**

19 There are authorized to be appropriated to the Sec-
20 retary \$1,000,000 for a competitively awarded contract,
21 to an entity with offshore oil and gas management experi-
22 ence, for the transfer of technologies relating to ultra-
23 deepwater research and development developed at the
24 Naval Surface Warfare Center, Carderock Division.



1 **SEC. 6606. LIMITATION ON LEGAL FEE REIMBURSEMENT.**

2 The Department of Energy shall not, except as re-
3 quired under a contract entered into before the date of
4 enactment of this Act, reimburse any contractor or sub-
5 contractor of the Department for any legal fees or ex-
6 penses incurred with respect to a complaint subsequent
7 to—

8 (1) an adverse determination on the merits with
9 respect to such complaint against the contractor or
10 subcontractor by the Director of the Department of
11 Energy's Office of Hearings and Appeals pursuant
12 to section 708 of title 10, Code of Federal Regula-
13 tions, or by a Department of Labor Administrative
14 Law Judge pursuant to section 211 of the Energy
15 Reorganization Act of 1974 (42 U.S.C. 5851); or

16 (2) an adverse final judgment by any State or
17 Federal court with respect to such complaint against
18 the contractor or subcontractor for wrongful termi-
19 nation or retaliation due to the making of disclo-
20 sures protected under chapter 12 of title 5, United
21 States Code, section 211 of the Energy Reorganiza-
22 tion Act of 1974 (42 U.S.C. 5851), or any com-
23 parable State law,
24 unless the adverse determination or final judgment is re-
25 versed upon further administrative or judicial review.

